APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,097	03/30/2004	Miguel Peeters	1875.4380001	3088

26111   7590   06/17/2010
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
BATURAY, ALICIA

ART UNIT	PAPER NUMBER
2446	

MAIL DATE	DELIVERY MODE
06/17/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/812,097	PEETERS ET AL.
	Examiner	Art Unit	
	Alicia Baturay	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 March 2010*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-21 and 24-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-17,19-21 and 24-34* is/are rejected.

7) ☒ Claim(s) *18* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *19 March 2010* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the amendment filed 19 March 2010.

2.   Claims 1-21 and 24-34 were amended.

3.   Claims 22, 23, 35, and 36 were cancelled.

4.   Claim 18 is objected to.

5.   Claims 1-21 and 24-34 are pending in this Office Action.

Response to Amendment

6.   The objections to the drawings were addressed and are withdrawn.

7.   The objections to the specification were addressed and are withdrawn.

8.   The objections to the claims remain were addressed and are withdrawn.

9.   The rejection of claims 10 and 18 under 35 U.S.C. § 112, 2nd paragraph for indefiniteness

has been addressed and is withdrawn.

10.   Applicant's amendments and arguments with respect to claims 1-17, 19-21, and 24-34

filed on 19 March 2010 have been fully considered but they are deemed to be moot in view

of the new grounds of rejection.

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

12.   Claims 1-9, 11, 12, 24, 25, and 27-30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Mueller et al. (U.S. 6,650,658) in view of Lacey, III (U.S. 2003/0128669)

in view of ITU-T Recommendation G.992.3 and further in view of Johnson et al. (U.S.

6,535,504).

        Mueller teaches the invention substantially as claimed including a system and method for

a handshake protocol for digital subscriber line (DSL) and similar telecommunication

systems that makes beneficial use of aliasing to select and decode signaling tones. In

particular, the invention carefully selects signaling tones at frequencies such that higher

frequency tones would alias down and coincide with specific base tones after sub-sampling.

Thus, rather than filtering out higher frequencies to avoid aliasing, aliasing is exploited to use

these higher frequencies. This technique would allow a receiver to detect and decode the

higher frequency tones at lower frequency tone locations or bands. A related innovation is a

band set, which includes one or more tones within a particular frequency band, where

typically each tone in a band set corresponds to a different tone set. Exploiting the effects of

aliasing eliminates the need to search for compatible spectrum, simplifies receiver design,

provides flexibility, scalability and future-proofing, and allows handshaking sessions to be

established across mutually exclusive spectrums. The invention is particularly useful for DSL

systems, and in particular is well suited for the proposed G.hs standard (see Abstract).

13.   With respect to claims 1 and 24, Mueller teaches a method for selecting a resultant mode

of operation for at least two modems that communicate via a communications network,

comprising: (a) performing a handshake procedure to determine a set of possible modes of

operation supported by the at least two modems (Mueller, col. 2, lines 23-25).

Mueller does not explicitly teach the set of possible modes of operation including

protocol standards and annex that are supported by the at least two modems.

However, Lacey III teaches the set of possible modes of operation including protocol

standards and annex that are supported by the at least two modems (Lacey III, page 1,

paragraph 7, and page 3, DETECT_REQ comments).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Mueller in view of Lacey III in order to enable the set of possible modes

of operation including protocol standards and annexes that are supported by the at least two

modems. One would be motivated to do so in order to provide a system of interfacing a

protocol standard for the handshaking session such that the messages are properly received

and transmitted with minimal timing requirements (Lacey III, page 1, paragraph 7).

The combination of Mueller and Lacey III does not explicitly teach multiple annexes.

However, ITU-T Recommendation G.992.3 teaches the use of plural annexes (ITU-T

Recommendation G.992.3, pages 195, 196, 261).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Mueller and Lacey III in view of ITU-T

Recommendation G.992.3 in order to enable the use of annexes of xDSL standards. One

would be motivated to do so in order to provide, by negotiation during initialization, for U-

interface compatibility and interoperability between transceivers complying with this
Recommendation and between transceivers that include different combinations of options
(ITU-T Recommendation G.992.3, page ii).

The combination of Mueller, Lacey III, and ITU-T Recommendation G.992.3 does not
explicitly teach selecting from a number of favorable modes of operation.

However, Johnson teaches (b) deriving a set of favorable modes of operation from the set
of possible modes of operation (Johnson, col. 5, lines 4-17); and, (c) in case there exist two
or more favorable modes of operation, performing a probing-based selection by evaluating
respective performances of each of the favorable modes of operation and selecting a
favorable mode of operation with a best performance from among the set of favorable modes
as the resultant mode of operation (Johnson, col. 5, lines 18-35).

It would have been obvious to one of ordinary skill in the art at the time the invention
was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation
G.992.3 in view of Johnson in order to enable selecting from a number of favorable modes of
operation. One would be motivated to do so in order to provide a communication path
selection method which is more dynamic and adaptive to changing needs and conditions
(Johnson, col. 2, lines 29-32).

14.   With respect to claims 2 and 25, the combination of Mueller, Lacey III, ITU-T
Recommendation G.992.3 and Johnson teaches the invention described in claims 1 and 24,
including the method wherein the protocol standard is selected from a group consisting of
G.992.1, G.992.2, G.992.3, G.992.4, and G.992.5 (Mueller, col. 1, lines 16-35).

15.   With respect to claim 3, the combination of Mueller, Lacey III, ITU-T Recommendation
       G.992.3 and Johnson teaches the invention described in claim 2, including the method of
       claim 2, in which wherein step (a) comprises: (a)(i) performing the handshake procedure to
       determine a set of possible modes of operation supported by the at least two modems
       (Mueller, col. 2, lines 23-25), the set of possible modes of operation are being related to
       particular annexes of the protocol standard (ITU-T Recommendation G.992.3, pages 195,
       196, 261).

16.   With respect to claims 4 and 27, the combination of Mueller, Lacey III, ITU-T
       Recommendation G.992.3 and Johnson teaches the invention described in claim 1 and 24,
       including the wherein step (b) comprises: (b)(i) deriving the set of favorable modes of
       operation from the set of possible modes of operation (Johnson, col. 5, lines 4-17) by
       performing a priority-based selection (Johnson, col. 5, lines 4-17).

17.   With respect to claims 5 and 28, the combination of Mueller, Lacey III, ITU-T
       Recommendation G.992.3 and Johnson teaches the invention described in claims 4 and 27,
       including the method wherein step (b)(i) comprises: (b)(i)(A) selecting a first set of favorable
       modes of operation from among the set of possible modes of operation using a first level of
       priority-based selection (Johnson, col. 5, lines 4-17) based on priorities assigned to different
       classes of upstream tone usage (Mueller, col. 5, lines 44-48).

18.   With respect to claim 6, the combination of Mueller, Lacey III, ITU-T Recommendation

        G.992.3 and Johnson teaches the invention described in claim 5, including the method in

        wherein the different classes of upstream tone usage comprise, in descending order of

        priority, annex J type, annex B type, and annex A type (ITU-T Recommendation G.992.3,

        pages 257-261).

19.   With respect to claim 7, the combination of Mueller, Lacey III, ITU-T Recommendation

        G.992.3 and Johnson teaches the invention described in claim 5, including the method

        wherein step (b)(i)(A) comprises: (b)(i)(A)(1) selecting the first set of favorable modes of

        operation from among the set of possible modes of operation using a first level priority-based

        selection (Johnson, col. 5, lines 4-17) based on priorities assigned to different classes of

        upstream tone usage (Mueller, col. 5, lines 44-48), one or more of the different classes of

        upstream tone usage being excluded from the priority-based selection (Mueller, col. 2, lines

        4-7).

20.   With respect to claims 8 and 29, the combination of Mueller, Lacey III, ITU-T

        Recommendation G.992.3 and Johnson teaches the invention described in claims 5 and 28,

        including the method wherein step (b)(i) further comprises: (b)(i)(B) selecting a second set of

        favorable modes of operation from among the first set of favorable modes of operation using

        a second level of priority-based selection based on priorities assigned to various protocol

        standards (Johnson, col. 5, lines 18-35).

21.   With respect to claim 9, the combination of Mueller, Lacey III, ITU-T Recommendation
        G.992.3 and Johnson teaches the invention described in claim 8, including the method
        wherein the various protocol standards are prioritized in a descending order of priority
        (Gerszberg, col. 20, lines 13-16), at least one of the various protocol standards being selected
        from a group consisting of G.992.5, G.992.4, G.992.3, G.992.1, G.992.2, and non-ITU
        standards (Mueller, col. 1, lines 16-35).

22.   With respect to claims 11 and 30, the combination of Mueller, Lacey III, ITU-T
        Recommendation G.992.3 and Johnson teaches the invention described in claims 1 and 24,
        including the method wherein step (c) comprises: (c)(i) initializing the at least two modems
        to a probing mode of operation (Mueller, col. 2, lines 23-25) when the two or more favorable
        modes of operation exist (Johnson, col. 5, lines 4-17).

23.   With respect to claim 12, the combination of Mueller, Johnson and ITU-T
        Recommendation G.992.3 teaches the invention described in claim 11, including the method
        wherein step (c)(i) comprises: (c)(i)(A) initializing the at least two modems to a diagnostic
        mode of operation (ITU-T Recommendation G.992.3, page 144) when the two or more
        favorable modes of operation exist (Johnson, col. 5, lines 4-17).

24.   Claims 10, 16, 17, 19-21, and 32-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Mueller in view of Lacey III in view of ITU-T Recommendation G.992.3

in view of Johnson and further in view of Gerszberg et al. (U.S. 6,396,531).

25.   With respect to claim 10, the combination of Mueller, Lacey III, ITU-T Recommendation

G.992.3 and Johnson the invention described in claim 9, including a method for selecting a

resultant mode of operation for at least two modems that communicate via a communications

network, comprising: (a) performing a handshake procedure to determine a set of possible

modes of operation supported by the at least two modems (Mueller, col. 2, lines 23-25) and

the method wherein the G.992.3, the G.992.4, and the G.992.5 standards (Mueller, col. 1,

lines 16-35).

    Mueller does not explicitly teach the set of possible modes of operation including

protocol standards and annex that are supported by the at least two modems.

    However, Lacey III teaches the set of possible modes of operation including protocol

standards and annex that are supported by the at least two modems (Lacey III, page 1,

paragraph 7, and page 3, DETECT_REQ comments).

    It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Mueller in view of Lacey III in order to enable the set of possible modes

of operation including protocol standards and annexes that are supported by the at least two

modems. One would be motivated to do so in order to provide a system of interfacing a

protocol standard for the handshaking session such that the messages are properly received

and transmitted with minimal timing requirements (Lacey III, page 1, paragraph 7).

The combination of Mueller and Lacey III does not explicitly teach multiple annexes.

However, ITU-T Recommendation G.992.3 teaches the use of plural annexes (ITU-T Recommendation G.992.3, pages 195, 196, 261).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller and Lacey III in view of ITU-T Recommendation G.992.3 in order to enable the use of annexes of xDSL standards. One would be motivated to do so in order to provide, by negotiation during initialization, for U-interface compatibility and interoperability between transceivers complying with this Recommendation and between transceivers that include different combinations of options (ITU-T Recommendation G.992.3, page ii).

The combination of Mueller, Lacey III, and ITU-T Recommendation G.992.3 does not explicitly teach selecting from a number of favorable modes of operation.

However, Johnson teaches (b) deriving a set of favorable modes of operation from the set of possible modes of operation (Johnson, col. 5, lines 4-17); and, (c) in case there exist two or more favorable modes of operation, performing a probing-based selection by evaluating respective performances of each of the favorable modes of operation and selecting a favorable mode of operation with a best performance from among the set of favorable modes as the resultant mode of operation (Johnson, col. 5, lines 18-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 in view of Johnson in order to enable selecting from a number of favorable modes of operation. One would be motivated to do so in order to provide a communication path

selection method which is more dynamic and adaptive to changing needs and conditions (Johnson, col. 2, lines 29-32).

The combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 and Johnson does not explicitly teach the use of protocol standards being assigned a similar priority.

However, Gerszberg teaches protocol standards are assigned a similar priority (Gerszberg, col. 20, lines 13-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 and Johnson in view of Gerszberg in order to enable assigning protocol standards a similar priority. One would be motivated to do so in order to provide an integrated device that incorporates access to all of the different services that might be available into a single access device (Gerszberg, col. 2, lines 41-44).

26.   With respect to claims 16 and 32, the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3, Johnson and Gerszberg teaches the invention described in claims 1 and 24, including the method wherein step (c) comprises: (c)(i) determining a performance index indicating the respective performances (Gerszberg, col. 20, lines 13-16) for each of the favorable modes of operation (Johnson, col. 5, lines 4-17).

27.   With respect to claim 17, the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3, Johnson and Gerszberg teaches the invention described in claim

16, including the method wherein step (c)(i) comprises: (c)(i)(A) deriving the performance

index indicating the respective performances (Gerszberg, col. 20, lines 13-16) for each of the

favorable modes of operation (Johnson, col. 5, lines 4-17) from line conditions of the

communications network (Gerszberg, col. 20, lines 13-16).

28.   With respect to claims 19 and 33, the combination of Mueller, Lacey III and ITU-T

Recommendation G.992.3, Johnson and Gerszberg teaches the invention described in claims

24 and 33, including the method wherein step (c) further comprises: (c)(ii) selecting the

favorable mode of operation with a highest performance index as the resultant mode of

operation (Gerszberg, col. 20, lines 13-16).

29.   With respect to claim 20, the combination of Mueller, Lacey III and ITU-T

Recommendation G.992.3, Johnson and Gerszberg teaches the invention described in claim

16, including the method wherein step (c) further comprises: (c)(ii) determining a secondary

performance index when all of performance indices from among the performance index are

equal to a maximum ; and (c)(iii) evaluating the secondary performance index for each of the

favorable modes of operation (Johnson, col. 5, lines 18-35).

30.   With respect to claims 21 and 34, the combination of Mueller, Lacey III and ITU-T

Recommendation G.992.3, Johnson and Gerszberg teaches the invention described in claims

11 and 24, including the method wherein step (c) further comprises: (c)(ii) deciding whether

to re-initialize the at least two modems before data transmission is started (Gerszberg, col. 8,

lines 49-63).

31.   Claims 13, 14, 26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mueller in view of Lacey III in view of ITU-T Recommendation G.992.3 in view of Johnson

and further in view of Khadavi (U.S. 7,027,405).

32.   With respect to claims 13 and 31, Mueller teaches the invention described in claims 11

and 24, including a method for selecting a resultant mode of operation for at least two

modems that communicate via a communications network, comprising: (a) performing a

handshake procedure to determine a set of possible modes of operation supported by the at

least two modems (Mueller, col. 2, lines 23-25).

Mueller does not explicitly teach the set of possible modes of operation including

protocol standards and annex that are supported by the at least two modems.

However, Lacey III teaches the set of possible modes of operation including protocol

standards and annex that are supported by the at least two modems (Lacey III, page 1,

paragraph 7, and page 3, DETECT_REQ comments).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Mueller in view of Lacey III in order to enable the set of possible modes

of operation including protocol standards and annexes that are supported by the at least two

modems. One would be motivated to do so in order to provide a system of interfacing a

protocol standard for the handshaking session such that the messages are properly received and transmitted with minimal timing requirements (Lacey III, page 1, paragraph 7).

The combination of Mueller and Lacey III does not explicitly teach multiple annexes.

However, ITU-T Recommendation G.992.3 teaches the use of plural annexes (ITU-T Recommendation G.992.3, pages 195, 196, 261).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller and Lacey III in view of ITU-T Recommendation G.992.3 in order to enable the use of annexes of xDSL standards. One would be motivated to do so in order to provide, by negotiation during initialization, for U-interface compatibility and interoperability between transceivers complying with this Recommendation and between transceivers that include different combinations of options (ITU-T Recommendation G.992.3, page ii).

The combination of Mueller, Lacey III, and ITU-T Recommendation G.992.3 does not explicitly teach selecting from a number of favorable modes of operation.

However, Johnson teaches (b) deriving a set of favorable modes of operation from the set of possible modes of operation (Johnson, col. 5, lines 4-17); and, (c) in case there exist two or more favorable modes of operation, performing a probing-based selection by evaluating respective performances of each of the favorable modes of operation and selecting a favorable mode of operation with a best performance from among the set of favorable modes as the resultant mode of operation (Johnson, col. 5, lines 18-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation

G.992.3 in view of Johnson in order to enable selecting from a number of favorable modes of operation. One would be motivated to do so in order to provide a communication path selection method which is more dynamic and adaptive to changing needs and conditions (Johnson, col. 2, lines 29-32).

The combination of Mueller, Lacey III, ITU-T Recommendation G.992.3 and Johnson does not explicitly teach the use of signal-to-noise ratio.

However, Khadavi teaches the method wherein step (c) comprises: (c)(i) measuring a condition of the communications network; and (c)(ii) determining a signal-to-noise ratio of the communications network using a measured condition (Khadavi, col. 4, lines 2-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III, ITU-T Recommendation G.992.3 and Johnson in view of Khadavi in order to enable the use of signal-to-noise ratio. One would be motivated to do so in order to predict a local loop's capability to support xDSL services across an entire range of frequencies over which this technology can operate (Khadavi, col. 2, lines 34-36).

33.   With respect to claim 14, the combination of Mueller, Lacey III, ITU-T Recommendation G.992.3, Johnson and Khadavi teaches the invention described in claim 1, including the method wherein step (c) comprises: (c)(i) estimating a condition of the communications network; and (c)(ii) determining a signal to noise ratio of the communications network using an estimated condition (Khadavi, col. 4, lines 2-6).

34.   With respect to claim 26, the combination of Mueller, Lacey III, ITU-T Recommendation

G.992.3, Johnson and Khadavi teaches the invention described in claim 24, including the

modem unit wherein the modem unit is from among a group consisting of a central xDSL

modem and a remote xDSL modem (Khadavi, col. 4, line 52 – col. 5, line 10).

35.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller in view

of Lacey III in view of ITU-T Recommendation G.992.3 in view of Johnson and further in

view of Stone et al. (U.S. 7,391,780).

36.   With respect to claim 15, Mueller teaches the invention described in claim 1, including a

method for selecting a resultant mode of operation for at least two modems that communicate

via a communications network, comprising: (a) performing a handshake procedure to

determine a set of possible modes of operation supported by the at least two modems

(Mueller, col. 2, lines 23-25).

     Mueller does not explicitly teach the set of possible modes of operation including

protocol standards and annex that are supported by the at least two modems.

     However, Lacey III teaches the set of possible modes of operation including protocol

standards and annex that are supported by the at least two modems (Lacey III, page 1,

paragraph 7, and page 3, DETECT_REQ comments).

     It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Mueller in view of Lacey III in order to enable the set of possible modes

of operation including protocol standards and annexes that are supported by the at least two modems. One would be motivated to do so in order to provide a system of interfacing a protocol standard for the handshaking session such that the messages are properly received and transmitted with minimal timing requirements (Lacey III, page 1, paragraph 7).

The combination of Mueller and Lacey III does not explicitly teach multiple annexes.

However, ITU-T Recommendation G.992.3 teaches the use of plural annexes (ITU-T Recommendation G.992.3, pages 195, 196, 261).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller and Lacey III in view of ITU-T Recommendation G.992.3 in order to enable the use of annexes of xDSL standards. One would be motivated to do so in order to provide, by negotiation during initialization, for U-interface compatibility and interoperability between transceivers complying with this Recommendation and between transceivers that include different combinations of options (ITU-T Recommendation G.992.3, page ii).

The combination of Mueller, Lacey III, and ITU-T Recommendation G.992.3 does not explicitly teach selecting from a number of favorable modes of operation.

However, Johnson teaches (b) deriving a set of favorable modes of operation from the set of possible modes of operation (Johnson, col. 5, lines 4-17); and, (c) in case there exist two or more favorable modes of operation, performing a probing-based selection by evaluating respective performances of each of the favorable modes of operation and selecting a favorable mode of operation with a best performance from among the set of favorable modes as the resultant mode of operation (Johnson, col. 5, lines 18-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 in view of Johnson in order to enable selecting from a number of favorable modes of operation. One would be motivated to do so in order to provide a communication path selection method which is more dynamic and adaptive to changing needs and conditions (Johnson, col. 2, lines 29-32).

The combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 and Johnson does not explicitly teach determining an upstream bit rate and a downstream bit rate.

However, Stone teaches the method wherein step (c) comprises: (c)(i) determining, at least one of an upstream bit rate and a downstream bit rate (Stone, col. 4, lines 16-30) for each of the favorable modes of operation ((Johnson, col. 5, lines 4-17)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Mueller, Lacey III and ITU-T Recommendation G.992.3 and Johnson in view of Stone in order to enable determining an upstream bit rate and a downstream bit rate. One would be motivated to do so in order to utilize statistical bandwidth information to enable more accurate predictions to occur (Johnson, col. 2, lines 27-30).

Reasons for Allowance

37.   The following is an examiner's statement of reasons for allowance: claim 18 is allowable

over the prior art of record.

The examiner has found that the prior art of record does not teach, suggest, or render

obvious, among other things, the specific combination of a method or a modem unit for

selecting a resultant mode of operation for at least two modems that communicate via a

communications network, comprising: (a) performing a handshake procedure to determine a

set of possible modes of operation supported by the at least two modems, the set of possible

modes of operation include protocol standards and annexes that are supported by the at least

two modems; (b) deriving a set of favorable modes of operation from the set of possible

modes of operation; (c) in case there exist two or more favorable modes of operation,

performing a probing-based selection by evaluating respective performances of each of the

favorable modes of operation and selecting a favorable mode of operation with a best

performance from among the set of favorable modes as the resultant mode of operation;

wherein step (c) comprises: (c)(i) determining at least one of an upstream bit rate and a

downstream bit rate for each of the favorable modes of operation; and wherein (c)(i)

comprises: (c)(i)(A) determining a performance index (PI) for each of the favorable modes of

operation according to:

$$PI = \propto_d \cdot (DS - DS_{\min}) + \propto_u \cdot (US - US_{\min}),$$

wherein DS and US denote the downstream and the upstream bit rate, respectively, $DS_{\min}$

and $US_{\min}$ denote the minimum downstream and the minimum upstream bit rate, respectively,

and $\propto_d$ and $\propto_u$ denote weight factors (major difference in the claims not found in the prior art) as set forth in the specification and recited in claim 18.

38.   For these reasons, if the limitations of dependent claim 18 (and the claim it depends on, claim 15) were incorporated into the independent claims, this case would be in condition for allowance.

39.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be

obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alicia Baturay/
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446

June 16, 2010